

IFW

USPTO
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

7 July 2008

Re: response to office action, application 10/566,482

Dear Sir,

In response to your office action dated 04/16/2008 please find a further amended list of claims for the above application.

Comments:

In view of the prior art cited by the examiner (Little et al, USPGPUB NO. 2004/0101861 filed Nov. 27, 2002) claim 1 has been limited to a monolithically integrated biochip containing light sources, detectors and planar waveguide(s).

Claim 2 has been cancelled and its subject matter incorporated into claim 1.

Claim 3 has been cancelled as being anticipated by Little et al.

In item 17 of the office action the examiner rejects claims 4-8 as being anticipated by Little et al. Little et al teaches the use of a III-V semiconductor substrates such as GaAs or InP to form light detectors and/or light sources (paragraphs 0033, 0043 and 0051), whereas the present invention teaches away from using such substrates due to their *inherent cost and substrate size limitations* (paragraph 0012 of the present specification). It is the preferred embodiment of the present invention to use *a lower cost non-semiconductor substrate (e. g. glass substrate)* (paragraph 0020 of the present specification).

It needs to be clarified that what is referred in claims 4-8 as *a thin film semiconductor layer* is a layer that exhibits semiconductor properties but can be formed on a substrate irrespectively of its material, e. g. on low cost glass substrate. This is different from Little et al who teaches the use of III-V semiconductor substrates whose crystalline properties enable the epitaxial growth of semiconductor layers in which the sources/detectors are formed. These multilayered structures should not be mistaken for *a thin film semiconductor layer* of the present invention as they are essentially a continuation of the crystalline structures of the respective III-V substrates on which they are grown and therefore are not of thin film nature.

The present invention, therefore, (as stated in paragraph 0012 of the present specification) aims to achieve low cost, high volume manufacturing through the